

## Two new records of *Parascolopsis* (Pisces: Nemipteridae) from the west coast of India, with a redescription of *Parascolopsis boesemani* (Rao and Rao)

S. K. NAIK<sup>1</sup>, D. E. UIKEY<sup>1</sup>, B.C. RUSSELL<sup>2</sup> AND A. B. SHANBHAG<sup>3</sup>

<sup>1</sup> Fishery Survey of India, Mormugao Zonal Base, Goa 403 803, INDIA

<sup>2</sup> Museum and Art Gallery of the Northern Territory, GPO Box 4646, Darwin, NT 0801, AUSTRALIA

Correspondence: barry.russell@nt.gov.au

<sup>3</sup> Department of Zoology, Goa University, Taleigao Plateau, Goa 402 206, INDIA

### ABSTRACT

The occurrence of the dwarf monocle breams *Parascolopsis eriomma* (Jordan and Richardson) and *P. boesemani* (Rao and Rao) (Pisces: Nemipteridae) from the west coast of India is reported for the first time based on specimens collected from off Goa. *Parascolopsis boesemani* is redescribed and compared with other congeners. A key to the western Indian Ocean species of *Parascolopsis* is provided.

KEYWORDS: Pisces, Nemipteridae, *Parascolopsis*, new records, west coast of India, key, western Indian Ocean species.

### INTRODUCTION

Of the 11 species of dwarf monocle breams, genus *Parascolopsis* (Pisces: Nemipteridae), recorded from the Indian and Pacific Oceans, seven are known to occur along the Indian subcontinent, including Sri Lanka: *P. inermis* (Schlegel), *P. townsendi* Boulenger, *P. eriomma* (Jordan and Richardson), *P. aspinosa* (Rao and Rao), *P. boesemani* (Rao and Rao), *P. baranesi* Russell and Golani and *P. capitinis* Russell (Russell 1990; Russell and Golani 1993; Russell 1996). Among the Indian species, only *P. aspinosa* was previously known to have a wide distribution, and is found along both coasts (Russell 1990).

During cruises along the west coast of India by the Fishery Survey of India vessel MFV *Matsya Vishwa* in August and September 1998, one specimen of *Parascolopsis eriomma* and two specimens of a red-spot *Parascolopsis*, later confirmed to be *P. boesemani*, were collected. *Parascolopsis boesemani* was initially described from a single and, until now, the only known specimen, collected from Waltair on the east coast of India.

The recently collected specimens represent the first confirmed record of *Parascolopsis eriomma*, and the first record of *P. boesemani*, from the west coast of India. Based on the additional specimens, *P. boesemani* is redescribed, and a key to the western Indian Ocean species of *Parascolopsis* is provided.

### METHODS

The specimens were deep-frozen before they were brought to shore for examination. The colour and

pigmentation was observed in fresh condition as well as after thawing. All measurements were taken with vernier callipers to the nearest 0.1 mm. Length measurements are standard length (SL). Terminology, measurements and counts are the same as those used by Russell and Golani (1993). The specimens referred to in this paper are deposited in the Museum and Art Gallery of the Northern Territory, Darwin, Australia (NTM), and the National Museum of Natural History, Leiden, Netherlands (RMNH).

### SYSTEMATICS

*Parascolopsis eriomma* (Jordan and Richardson, 1909)  
(Fig. 1)

*Scolopsis eriomma* Jordan and Richardson, 1909: 108, pl. 80 (Formosa [now Taiwan]; Ceylon [now Sri Lanka]).

**Material examined.** NTM S.15354–001, 186 mm SL (spent female), Goa, central west coast of India (15° 54'N, 72° 54'E), MFV *Matsya Vishwa*, demersal trawl, 16 September 1998, depth 145 m.

**Description.** Dorsal rays X,9; anal rays III,7; pectoral rays ii,14; principle caudal rays 18; lateral line scales 36, transverse scale rows 3/10½; gill rakers 17. Body moderately deep, 2.8 in SL, head 3.3 in SL, head length less than body depth, body depth 0.8 in head; snout short, bluntly rounded, 5.7 in head; eye 2.7 in head; diameter of the eye greater than snout length, eye 0.5 in snout; interorbital width equal to eye diameter; suborbital narrow, least depth, 2.5 in eye diameter. Dorsal fin length 1.9 in SL, fifth dorsal ray longest, about equal to length of longest spine (fourth



Fig. 1. *Parascolopsis eriomma*, NTM S.15354-001, 186 mm SL, off Goa, India.

dorsal spine). Anal fin length 5.5 in SL. first anal spine 1.8 in second, second 1.5 in third. Pectoral fins moderately long, reaching to level of vent, their length 1.1 in head. Pelvic fins moderately long, reaching to level of vent, their length 1.4 in head length. Length of pectoral fin 1.3 in pelvic fin.

Mouth rather small, maxillary reaching beyond anterior margin of the pupil (Fig. 1). Jaw teeth villiform. Scales on top of head extending forward to mid-pupil; snout naked; suborbital naked, with small spine at upper corner and fine denticulations on posterior margin. Premaxilla naked. Preopercle with five transverse scale rows and broad naked flange; posterior margin of preopercle finely denticulate. Dorsal fin emarginate; caudal fin slightly forked. Gill rakers spatulate, compressed, with nine spines along distal margin.

**Colour.** Body rosy with orange tinge, pale below lateral line (Fig. 1). Golden yellow stripe clearly marked at the mid-posterior margin of pupil to the margin of the eye, but becoming diffused on the preopercle and opercle in the form of an indistinct pale yellowish band, which extends to the beginning of caudal peduncle. Preopercle and opercle with yellow sheen. Dorsal fin pink, its spinous margin reddish. Caudal fin rosy pink, its lower lobe pale yellow. Anal and pelvic fins milky white, suffused with pale yellow. Pectoral fins translucent yellow.

**Remarks.** Although Fisher and Bianchi (1984) indicated that the distribution of *Parascolopsis eriomma* includes the west coast of India, our specimen represents the first confirmed record from western Indian waters. The species was previously recorded from Vishakhapatnam, eastern India (Russell and Golani 1993) and Sri Lanka (Russell 1996).

***Parascolopsis boesemani* (Rao and Rao, 1981)**

(Fig. 2, Table 1)

*Scolopsis boesemani* Rao and Rao, 1981: 139, figs 2, 4 (Waltair, India).

**Material examined.** NTM S.15355-001, 2 specimens: 82.5–108 mm SL (both females) captured

off Goa, India (14° 58' N, 73° 14' E), demersal trawl, MFV *Matsya Vishwa*, 28 October 1998, depth 110–115 m.

**Additional material examined.** HOLOTYPE: RMNH 28191, 90.7 mm SL, Waltair, India.

**Description.** Dorsal rays X,9; anal rays III,7; pectoral rays ii,14; principle caudal rays 18; lateral line scales 39-41, transverse scale rows 3/14; gill rakers 9. Body moderately deep, 2.5–2.7 in SL. Head 2.4–2.5 in SL; head length greater than or equal to body depth, length of head 0.9–1.0 in body depth. Snout short, rounded, 5.2–5.4 in head length; eye 3.2–3.6 in head length; snout length less than eye diameter, 1.5 to 1.6 in eye; interorbital width 1.1–1.3 times in diameter of eye; suborbital shallow, least depth 4.8 times in diameter of eye. Dorsal fin length 2.0–2.3 in SL; fourth or fifth dorsal spine usually longest, and 1.9–2.3 times length of first dorsal spine; second through fifth dorsal rays longest, 1.1–1.2 times length of longest dorsal spine. Anal fin length 7.2–6.6 in SL; length of first anal spine 1.6–1.9 in second; length of second anal spine equal in length to third. Pectoral fins long, reaching to or beyond level of vent, 1.4 times in head length. Pelvic fins moderately long, not reaching to the level of vent, 1.7–2.0 times in head length.

Mouth of moderate size, maxillary reaching to about level to a vertical through anterior margin of pupil (Fig. 2). Jaw teeth villiform, in narrow bands tapering posteriorly in both jaws. Upper jaw with a series of small curved canines decreasing in size posteriorly on either side, and forming a narrow band of teeth. Lower jaw also with a band of teeth on either side, but these slightly smaller compared to teeth in upper jaw. Scales on top of head extending forward between eyes to above about posterior margin of pupil. Preopercle with five transverse rows of scales, its lower margin naked.

**Colour.** Body rosy pink, with three vertical, dark orange bands: first in front of first dorsal spine; second from the orange blotch of dorsal fin to anal fin, merging with colour of anal fin membrane; third from end of dorsal fin to end of anal fin, and extending over half of caudal peduncle (Fig. 2). Two greenish, golden yellow



Fig. 2. *Parascolopsis boesemani*, NTM S.15355-001, 82.5 mm SL, off Goa, India.

**Table 1.** Comparison of characters of the species of red-spot *Parascolopsis* and the specimens of *P. boesemani* collected from off Goa, western India.

	<i>P. rufomaculatus</i>	<i>P. baranesi</i>	<i>P. boesemani</i> holotype	<i>P. boesemani</i> specimens collected off Goa
SL (mm)	83.4-153.0	77.3-111.6	90.7	82.5-108.0
No. lateral-line scales	35-37	39	37	39-41
Pectoral fins	Moderately long, reaching to or just short of vent	Moderately long, reaching to or just short of vent	Long, reaching beyond vent	Long, reaching beyond vent
Pelvic fins	Short, not reaching vent	Short, not reaching vent	Long, reaching beyond vent	Short, not reaching vent
Scales on top of head	Reaching forward to middle of eye	Reaching forward to anterior nostril	Reaching forward posterior nostril	Reaching forward to posterior nostril
Body colour	Body pinkish, pearly white below	Body pale pink, silvery below mid-lateral line	Rosy yellow	Rosy pink
Vertical bands on body	No vertical bands	Traces of three vertical bands on upper half of body	Three pale rosy saddles on body and one on caudal fin peduncle	Three vertical, dark orange bands: first in front of dorsal fin, second from middle of dorsal fin, third on caudal peduncle

stripes running length of body: upper stripe extending from upper margin of eye to caudal fin base; lower stripe extending from base of pectoral fin to base of caudal fin. Pelvic fins pinkish orange anteriorly and milky white posteriorly. Pectoral fins golden yellow at base and pinkish along margin. Spinous part of dorsal fin membrane whitish at notch with blood red spot bordered with golden yellow pigmentation between sixth and tenth spine. Small pale red inconspicuous spot present between first and third soft ray; soft part of dorsal fin edged pink. Anal fin milky white, with pale red blotch on spinous portion, this colour extending to second anal fin ray. Caudal fin pale pink with red blotch centrally, paling towards lower portion.

**Colour (in alcohol).** Body pale brown below lateral line and darker above; three dark brown stripes running parallel to axis of body below lateral line, paler ventrally. Three vertical bands across body visible as blotches on dorsalmost stripe, the darkest of the three stripes.

**Remarks.** The specimens of *Parascolopsis boesemani* collected from the west coast of India differ slightly from the original description given by Rao and Rao (1981) in having shorter pelvic fins, not reaching the level of the vent (versus longer pelvic fin in the holotype of *P. boesemani*), and in having three stripes on the body (versus four in the holotype). In all other characters, our specimens closely resemble the holotype of *P. boesemani* and therefore are regarded as the same species.

*Parascolopsis boesemani* is one of three closely related species of *Parascolopsis*, all characterised by having a distinctive red spot in the middle of the dorsal fin: *P. baranesi*, *P. boesemani* and *P. rufomaculatus*

Russell, 1986. *Parascolopsis boesemani* differs from *P. rufomaculatus* notably in having the scales on top of the head reaching forward to the posterior nostrils (versus reaching forward only to middle of eye in *P. rufomaculatus*). *Parascolopsis boesemani* is closest to *P. baranesi*, but has longer pectorals (reaching beyond the vent), and head scales reaching forward to level of posterior nostril (versus head scales reaching to level of anterior nostril in *P. baranesi*), and has a darker body, with the stripes appearing clearly on its lower half.

A comparison of characteristics of our two specimens with the holotype of *P. boesemani* and the other species of red-spot *Parascolopsis* is given in Table 1.

#### Key to western Indian Ocean species of *Parascolopsis*

- 1a. Gill rakers on first arch 8-13 ..... 2
- 1b. Gill rakers on first arch 17-19 (Indo-W. Pacific) ..... *P. erionema*
- 2a. Pectoral fins reaching to, or just short of, vent; red blotch on dorsal fin between seventh and tenth dorsal spines (lost in preservative) (Gulf of Aqaba) ..... *P. baranesi*
- 2b. Pectoral fins reaching beyond vent; dorsal fin with or without black blotch ..... 3
- 3a. Scales on top of head not reaching to above anterior margin of eye; suborbital and premaxilla naked; margin of suborbital usually smooth; preopercle with 4-6 transverse scale rows, and broad naked flange posteriorly ..... 4

- 3b. Scales on top of head reaching posterior nostril; suborbital and premaxilla usually with scales posteriorly; margin of suborbital finely denticulate; preopercle with 5–9 transverse scale rows, and narrow naked flange posteriorly (W. Indian Ocean) ..... *P. townsendi*
- 4a. Dorsal fin with black blotch at base of middle of fin (N.W. Indian Ocean) ..... *P. aspinosa*
- 4b. Dorsal fin without black blotch at base ..... 5
- 5a. Gill rakers on first arch 11–12; pectoral fins with diffuse black spot dorsally on base (Sri Lanka) .  
..... *P. capitinis*
- 5b. Gill rakers on first arch 8–10; pectoral fins without black spot on base ..... 6
- 6a. Dorsal fin with blood red spot between sixth and tenth dorsal spines (lost in preservative); three vertical, dark orange bands on back (E. and W. coasts of India) ..... *P. boesemani*
- 6b. Dorsal fin without red spot; four broad, dark reddish bars on back (E. Indian Ocean and W. Pacific) ..... *P. inermis*

ACKNOWLEDGMENTS

The authors thank the skippers and the leaders of the August and September 1998 cruises of the Fishery Survey of India vessel MFV *Matsya Vishwa*. We thank Dr M. F. Gomon and Dr H. K. Larson for their critical comments on the manuscript.

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Accepted 2 October 2002